Conservation Cover

Conservation Practice Job Sheet (327)
Native Warm Season Grass Planting
Kentucky

Natural Resources Conservation Service (NRCS) **November 2001**

Participant Name _____
Contract Number _____
Scheduled Completion Date: _____

INFORMATION ON THIS JOB SHEET IS CONSIDERED TO BE PART OF THE CONTRACT AND/OR CONSERVATION PLAN.

Definition

This Conservation Cover job sheet will be used in establishing pure native warm season grass stands and mixed stands of native grass and compatible legumes and/or forbs as part of a conservation plan.

Purpose

Establish native warm season grasses, legumes, and forb species to provide conservation cover and wildlife habitat for grassland dependent species.

Conditions Where Practice Applies

This practice applies on land that will be retired from agricultural production requiring permanent protective cover and on other lands needing permanent protective cover. This practice does not apply to plantings for forage production or to critical area plantings.

Establishment Specifications

1. Native grass and native grass mixtures that include forbs will be seeded between April 15th and June 30th. When planting legumes with native grasses, planting should occur between April 15th and May 15th. Legumes can also be over seeded during the fall or spring after native grass planting. (Annual legumes may only be seeded during the spring.)

2. Species and seeding rates will be according to Table 3.

3. Seed will conform to minimum state standards for purity, germination and other features. Seed tags and other information may be requested by NRCS representatives to verify contract compliance.

4. Soil amendments, when planned, shall be made according to University of Kentucky fertilizer recommendations. Nitrogen and lime are not recommended on native grass plantings for conservation cover. See Table 3 for more detail on soil amendments.

5. Competition control, seedbed preparation and seeding shall be done according to the following.

<u>Competition Control Before Planting</u>

Competition control is critical to ensuring a good stand of native grass. Either conventional seedbed preparation or herbicide application or both may be used to control competition prior to planting.

Several steps are required to get successful competition control when using a herbicide especially on fescue stands. The first step in killing fescue is to mow the area in late summer for a fall herbicide burn down or in late summer or early spring for a spring herbicide burn down. If possible after mowing and prior to herbicide application,

remove the hay to provide a better seed bed and allow for better herbicide contact with vegetation. (Hay removal is not allowed if the area is currently under a CRP contract.)

If needed, a second herbicide application should be planned. This application should occur just prior to native grass planting and after the remaining vegetation has regrown to a 4 - 6 inch height. All herbicide applications shall be made when vegetation is actively growing.

A second herbicide application is recommended for dense fescue or orchard grass stands and other areas where competition may not be controlled by one herbicide application. Table 1 provides some options for controlling competition prior to planting. These options are in ascending order of effectiveness and cost.

Seeding and Seedbed Preparation

Important: Regardless of the seeding method used, seeding depth should never exceed ¼ inch. Avoid no-till planting or cultipacking planted seedbeds in wet soil since it may result in placing the seed to deep. Having some seed on the soil surface is better than having it too deep.

No-till establishment is the preferred method since soil disturbance is minimum, thus reducing weed competition and soil erosion. Conventional seeding may be used for establishment on areas that have been recently cropped where weedy competition will be lessened and on areas where the risk of soil erosion is minimal.

No-Till Seeding

Smooth seeded species like Switchgrass can be planted using a conventional drill with the legume box set to place the seed ¼ inch deep. Debearded fluffy seeded species may also be planted using a conventional drill, however, the debearding process adds to the seed cost.

Fluffy seeded species will need to be seeded with a no-till drill specialized to plant these seeds. These specialized drills have seed boxes with dividers and agitators, picker wheels, and oversized drop tubes. Specialized drills are also designed so they can be adjusted to ensure shallow planting depths. Some conventional no-till drills have been retro fitted with a fluffy grass seed box. Care needs to be exercised when setting these drills to ensure that planting depths are no deeper than ¼ inch. Two common mistakes when no-till planting native grasses include pulling the drill to fast and not stopping to check seeding depth often enough.

Conventional Seeding

Prepare a clean seedbed by plowing and disking. After disking, make at least one trip over the field using a cultipacker to firm the seedbed. The importance of a dry firm seedbed cannot be over emphasized to ensure proper planting depth.

Broadcast fluffy seed with a drop spreader. When using a cyclone type spreader, a carrier should be used to help distribute the seed. The following carriers may be used: lime at a 200 lbs./acre rate; wheat at a 40 lbs./acre rate; or oats at 32 lbs./acre rate. Since fluffy seed will only broadcast as far as the carrier, make sure your passes overlap to ensure even coverage. If wheat or oats are used as a carrier, mow prior to seed head formation.

After broadcasting, cultipack or roll the seeded area only once to ensure good seed to soil contact and the proper shallow seeding depth.

Eastern Gama Grass Planting

Eastern Gama grass may be planted into a conventionally tilled seedbed or into grass sod using a corn planter. Planting depth for Eastern Gama grass shall not be deeper than 1-1½ inchs.

Operation and Maintenance

Competition control remains an important part of native grass establishment for up to two years after planting. To control competition and prevent weed seed formation, native grass stands may be top clipped during this period. Post-emergent herbicides like Plateau may also be used to control competition during the two-year establishment period. **If conservation cover is being established under a program, follow management requirements as outlined on the program specific Management and Maintenance job sheets.**

Table 1. This table contains several options for controlling competing grasses and weeds during native grass establishment. If two burn downs are planned, records should indicate that herbicide was applied to the field twice. A double rate of herbicide

applied once over a field does not constitute two burn downs and will be paid for a single burn down. Eastern Gama Grass, Switchgrass, and some forbs/wildflowers are not compatible with Plateau herbicide. If Plateau herbicide will be used, check the label to determine which forbs/wildflowers are compatible with Plateau prior to species selection. Two burn downs are recommended when the dominant species in a field is either fescue or orchard grass. Apply all herbicides according to label recommendations. The Plateau label limits application on CRP acreage to 4 ounces per acre per year.

Option	Current Condition	Timing	Method
1 Single Burn Down	Cropland Or Grassland	Spring	Remove excess vegetation prior to application if needed. Apply tank mixture after vegetation has grown 4to 6 inches. Apply just prior to planting. Tank Mixture: per acre in April – June. 1 to 2 Quarts Roundup Ultra* or similar Glyphosate based product. Note: Ammonium Sulfate or other additives may be used when applying herbicide at lower rates.
2 Single Burn Down	Cropland Or Grassland	Spring	Remove excess vegetation prior to application if needed. Apply tank mixture after vegetation has grown 4 to 6 inches. Apply just prior to planting to provide residual competition control. Tank Mixture: per acre in April – June. 4 – 6 oz. Plateau* Methylated soybean oil (MSO) or similar adjuvant may be added to the mixture to aid in product effectiveness.
3 Single Burn Down	Grassland	Spring	Remove excess vegetation in fall or winter. Apply tank mixture just prior to planting and after remaining vegetation grows 4 to 6 inches. Tank Mixture: per acre in April – June 1 quart Roundup Ultra* or similar Glyphosate base product. 4 - 6 oz. Plateau* Methylated soybean oil (MSO) or similar adjuvant may be added to the mixture to aid in product effectiveness.
4 Two Burn Downs	Grassland	Fall And Spring	Remove excess vegetation in late summer (Aug./Sept.) Apply tank mixture after vegetation has grown 4 to 6 inches. Tank Mixture: per acre in Sept./Oct. 1 to 1.5 Quarts Roundup Ultra* or similar Glyphosate based product. Note: Ammonium Sulfate or other additives may be used when applying herbicide at lower rates. And Apply tank mixture just prior to planting and after remaining vegetation grows 4 to 6 inches. Tank Mixture: per acre in April-June 1 to 2 Quarts Roundup Ultra* or similar Glyphosate based product. Note: Ammonium Sulfate or other additives may be used when applying herbicide at lower rates. If needed, 4 - 6 oz. Plateau* plus an adjuvant like methylated soybean oil may be added to the tank mix.
5 Two Burn Downs	Grassland	Spring And Spring	Remove excess vegetation in fall or winter. Apply tank mixture just prior to planting and after remaining vegetation grows 4 to 6 inches. Tank Mixture: per acre in April. 1 to 2 Quarts Roundup Ultra* or similar Glyphosate based product. Note: Ammonium Sulfate or other additives may be used when applying herbicide at lower rates. And if green-up occurs two to four weeks after initial spraying. Apply tank mixture just prior to planting and after remaining vegetation grows at least 4 inches. Tank Mixture: per acre in April-June 1 to 2 Quarts Roundup Ultra* or similar Glyphosate based product. Note: Ammonium Sulfate or other additives may be used when applying herbicide at lower rates. If needed, 4 - 6 oz. Plateau* plus an adjuvant like methylated soybean oil may be added to the tank mix.

NRCS does not require specific herbicides by trade name. The active ingredient in Roundup is glyphosate. The active ingredient in Plateau is imazameth. Other brands of herbicide containing these ingredients may be substituted, however, application rates, application timing, and results may vary. Additional information regarding vegetation control can be found in the University of Kentucky publication "Weed Management In Grass Pastures, Hay Fields, and Fence Rows" (AGR-172).

Table 2. The following table contains information about a planned herbicide application(s) to be carried out as part of the conservation plan for native grass plantings. Some herbicide applications will be made

prior to planting (pre-planting) to burn down existing vegetation. Other applications may be made after planting (post-planting) to help control competition during establishment. All herbicide products must be used according to label specifications.

Field Number	Pre-Planting Application(s) (Tentative Date)	Post-Planting Application(s) (Tentative Date)	Comments

Table 3. Species and seeding rates will be according to the information provided in the table below. If planned, the application of soil amendments shall be made according to University of Kentucky fertilizer and lime recommendations. All recommendations must be made from a soil test that is performed according to University of Kentucky laboratory soil test procedures. If additional room is needed on the tables below or above, make copies of this page and attach it to the back of the job sheet.

Field No.	Acres	Species	Lbs./Ac Seed (PLS)	Total Lbs. (PLS)	Seeding Method (Conv/No-Till)	P2O5 Lbs/Ac	K2O Lbs/Ac

Program specific guidance and additional technical recommendations are as follows.